The Farmer Life School: experience from an innovative approach to HIV education among farmers in South Africa = L'école de vie de fermier (FLS): une expérience d'une approche innovatrice à l'éducation du VIH parmi les fermiers en Afrique du Sud

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The Farmer Life School: experience from an innovative approach to HIV education among farmers in South Africa

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Abstract

The Farmer Life School (FLS) is an innovative approach to integrating HIV education into life skills and technical training for farmers. This study aims to gain insight into the strengths and weaknesses of this relatively new approach, through the implementation of an adapted version in South Africa. The results are presented of a pilot with three groups of community gardeners, predominantly women, attending weekly sessions. Impact was assessed in terms of three key elements: participation, learning, and empowerment. Data were collected through extensive session reports, follow-up interviews, and reflection exercises with facilitators and participating groups and individuals. The results suggest that a group-based discovery learning approach such as the FLS has great potential to improve food security and wellbeing, while allowing participants to explore issues around HIV/AIDS. However, the analysis also shows that HIV/AIDS-related illness and death, and the factors that drive the epidemic and its impact, undermine farmers' ability to participate, the safety and trust required for learning, and the empowerment process. Participatory approaches such as the FLS require a thorough understanding of and adaptation to the context.

Keywords: *Farmer Life School, HIV/AIDS, participation, learning, empowerment.*

Résumé

L'école de vie de fermier (FLS) est une approche innovatrice à l'intégration de l'éducation du VIH dans les compétences de vie et la formation technique de fermiers. Cette étude a pour but d'examiner les points forts et les faibles de cette approche relativement nouvelle en exécutant une version adaptée en Afrique du Sud. Cette communication présente des résultats d'une étude pilote qui consistait de trois groupes de jardiniers de la communauté, la plupart étant des femmes. Ces femmes ont assisté à de sessions hebdomadaires. L'impact fut évalué grâce aux trois éléments: la participation, l'apprentissage et l'autonomisation. Les données ont été recueillies à travers des longues sessions de rétroaction, des interviews et des exercices de réflexion avec des animateurs, des groupes en participation et des individus. Les résultats suggèrent que l'approche de découverte et apprentissage de groupes comme le FLS a du potentiel d'améliorer la sécurité alimentaire et le bien-être, et en même temps permet aux participants d'explorer les questions du VIH/SIDA. Cependant, l'analyse montre que les maladies et les morts liés au VIH/SIDA et les facteurs qui poussent l'épidémie et son impact sapent la capacité des fermiers à participer, la sécurité et la foi requises pour l'apprentissage ainsi que le processus d'autonomisation. Les approches à participation comme le FLS exigent une compréhension et une adaptation approfondies au contexte.

Mots clés: *École de vie de fermier, VIH/SIDA, participation, apprentissage, autonomisation.*

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Introduction

The Farmer Life School (FLS) is derived from the Farmer Field School (FFS), a discovery-based learning approach developed in the late eighties in Southeast Asia (du Guerny, Hsu & Chhitna, 2002). FFSs help farmers to gain a deep understanding of ecological concepts, as well as their practical applications. Instead of passive receivers of information and services, farmers are viewed as capable, responsible and sensible entrepreneurs and decision makers. Although the FFS was originally developed for integrated pest management for rice farmers in Asia, it now exists in over seventy countries around the world, encouraging farmer learning in areas as diverse as dairy farming, conservation agriculture, and community forest management (Braun, Jiggins, Röling *et al.*, 2006).

The FLS goes beyond the agro-ecosystem, and includes human ecology. The central idea is to develop farmers' critical thinking on the relationships between human behaviour and important livelihood issues (Yech, 2003). The FLS approach aims to strengthen farmers' understanding of how their socio-economic situation leads to risk-taking behaviour, prevent adverse social and economic effects from HIV/AIDS and other threats, and establish a farmer network to better address local issues in the interests of sustainable livelihoods (Yech, 2003).

The FLS differs from other approaches used in HIV/AIDS education in that it combines health-related messages with identifying root causes of vulnerability to HIV/AIDS and increasing the resilience of farm households through agriculture-related activities (du Guerny *et al.*, 2002). This may be particularly relevant in the case of HIV/AIDS. The shape of the epidemic is highly dependent on social processes created by people, not by the virus as such (Barnett & Whiteside, 2002; Loevinsohn & Gillespie, 2003). The spread of HIV infection is rooted in poverty and inequality (Farmer, 1999), while consequences of AIDS-linked illness and death are shaped by features of agricultural and livelihood systems (Loevinsohn & Gillespie, 2003). It is perhaps through analysing farmers' livelihoods that strategies can be developed to prevent HIV infection and mitigate the impact of AIDS.

Despite promises and high expectations, however, there is very little (evaluated) experience with the FLS (Braun *et al.*, 2006). Especially in sub-Saharan Africa, with some of the highest infection rates in the world, its potential and applicability are largely unknown. Although the FLS can serve as an educational setting for farmers to shape their future in the context of HIV/AIDS, HIV/AIDS itself may have a negative impact on participants and the social dynamics of the group, and prevent this approach from being such a setting.

The aim of this study was to gain insight in the strengths and weaknesses of the FLS approach, by piloting an adapted FLS in Msinga (KwaZulu-Natal), a rural and HIV high-prevalence area in South Africa. As empowerment of farmers through a process of participation and learning is central to the FLS approach, the following research questions were raised: to what extent did the pilot have an impact on participation, learning, and empowerment; which factors affected the relation between the pilot and its impact; and how was this related to HIV/AIDS?

Methodology

Research design

The FLS took place in the context of an action-research project, initiated by an agricultural NGO, in partnership with a community-managed health organisation, and a university institute specialised in participatory methodologies. Role players in agriculture and health were brought together to improve food security and wellbeing among poor and HIV/AIDS affected farmer households in Msinga, a poor, rural, traditional Zulu area with an HIV prevalence of more than 20%. A pilot study was conducted with three groups of community gardeners, which were geographically spread across the subdistrict. Each group elected a committee for daily organisation.

As this was an exploratory study on the strengths and weaknesses of the FLS approach in a HIV high-prevalence area, its validity was based on what is called 'sociological significance'. This implies that the researcher's interest is to assess whether descriptions of conceived relationships are meaningful, understandable and convincing for the people involved and the outside world (Guba & Lincoln, 1989). Therefore qualitative methods were found to be most appropriate.

The action-research project, of which this study was an integral part, was approved by the Social Ethics Committee of the University of KwaZulu-Natal. Members of the garden groups were fully informed about the nature and implications of the project, and gave their verbal consent to participate and to disclose information.

Delivery of the FLS intervention

Although the pilot in South Africa was designed according to the main principles and guidelines of the FLS (Chhaya, du Guerny, Geeves *et al.*, 2004; du Guerny *et al.*, 2002), it was adapted to the local context for practical implementation. The main characteristics of the pilot are presented below and summarised in Table 1.

Table 1. Main characteristics of the Farmer Life School in Msinga, South Africa

Size of class	Maximum 25
Age of participants	Between 20 and 80 years
Gender	Predominantly females
Recruitment of participants	Participation was open to members of three garden groups. They were selected by HBC workers and one of the partner organisations, based on socio-economic conditions and impact of HIV/AIDS. The FLS was explained in meetings with each group
Facilitator profile	Both men and women: • two came from the same area, not same community • various backgrounds • all had training in participatory approaches; two had experience as facilitator; two visited a Junior FLS • good interpersonal and literacy skills
Duration of FLS	One session a week for 6 weeks (+ follow-up visits and support during remainder of growing season)
Time for each session	All participants agreed on a session in the morning or afternoon
Number of facilitators	The team consisted of two community facilitators and two researchers. Local professionals were invited to facilitate specific topics
Venue	Most sessions took place in the gardens. Before planting, sessions with two groups were held in a clinic and a church (session 1 and 2), respectively
Attendance	Participants were requested to come to all sessions. Rules were made to create commitment. 'Catching' up was done in a way of mutual agreement as a rule. No one could be excluded because of lack of attendance
Negotiables and non-negotiables	Non-negotiable: basic structures/processes of the FLS; every garden member was welcome in the sessions Negotiable: topics covered (broader topics were suggested by facilitators)

Participants

Members of two garden groups were recruited and selected by home-based care (HBC) workers and one of the partner organisations, based on socio-economic characteristics and impact of HIV/AIDS. Group sizes were determined at 64 (group A) and 35 (group B) members. One already existing garden group with 47 members (group C) was included, mainly on the basis of socio-economic characteristics. Most households belonged to the poorer segments of their communities. The way in which the members were affected by HIV/AIDS varied. Some were HIV positive or had experienced illness or death in the family, others were looking after HIV/AIDS orphans. Members were predominantly women between 21 and 80 years old, with a majority (74%) between 30 and 60 years of age (Swaans, Van Diepen, Salomon *et al*., 2005). Mainly women were selected, as they are responsible for the production of food and the household. Due to poverty and the impact of HIV/AIDS, this increasingly involves young women whose husbands have died and grandmothers taking care of orphans (Walker, Reid & Cornell, 2004).

Setting and rules

The maximum number of participants in FLSs is set at 20 - 25 per 'class'. Since two groups were relatively large and showed high interest, they were split into a morning and an afternoon group. The groups met once a week for approximately 3 hours. Although the FLS usually takes place in the community (e.g. church, clinic), most sessions were held in the garden, as it played a central role in the curriculum. Principles of the FLS were respected at all times. Participation in the sessions was on a voluntary basis. Once someone had decided to participate, he/she was asked to come every time, so that the group would be consistent.

Curriculum

The FLS usually builds on former experiences with the FFS approach, but in this case the approach was new to participants. Therefore, a relatively 'short' curriculum was developed, inspired by the main concepts of the FLS approach, but with an emphasis on group building through participation and (discovery-based) learning. It was based on a livelihoods perspective, gradually shifting the focus from agriculture to health and HIV/AIDS, while emphasising linkages between them. The topics of the sessions were: introduction; vision and organisation; sustainable agriculture; nutrition and health; illness and care; and experimentation. The main elements of each session are summarised in Table 2.

Facilitation

The team consisted of two community facilitators and two researchers. The community facilitators came from Msinga and had good interpersonal and literacy skills; one had expertise in sustainable agriculture. The researchers facilitated parts of the sessions. All had extensive training in participatory approaches. For the facilitation of specific topics, (local) professionals were invited. They were relatively free to address what they wanted, but in the case of HIV/AIDS, it had to be done openly, without blaming certain groups or stigmatising particular behaviours.

Table 2. Sessions and main elements of the Farmer Life School in Msinga, South Africa

Session 1. Introduction
- Getting to know each other: a card game was introduced as energiser and tool to get to know each other
- The FLS and rules: the FLS and the overall programme were presented and rules were designed by the group
- Things going well/not well: participants were asked to evaluate, in groups, the progress made in the project so far

Session 2. Vision & organisation
- Vision: members were asked to all think and express their wishes and dreams for the future and to build a shared vision of the garden
- Organisation: different options for organising the group and the garden were discussed, such as farming in individual plots versus communal plots and home consumption versus marketing
- Experimentation: the principle of experimenting was explained, visualised by 'pictures' from a Junior FLS

Session 3. Sustainable agriculture
- Agro-ecological system analysis: an extensive garden walk was made for agro-ecosystem analysis; constraints and opportunities were identified and discussed
- Farming techniques: while exploring people's knowledge and experiences, one of the community facilitators presented and discussed alternative farming techniques such as mulching, kraal manure, compost making, organic pesticides, and crop varieties
- Experimentation: options for experiments with 'new' crops/techniques were put forward by the groups and prioritised

Session 4. Nutrition & health
- Nutrition and health: relations between agriculture, nutrition and health were explored with support of a dietician from the local hospital; nutrition was discussed in relation to food, (indigenous) crops, health, and HIV/AIDS
- Experimentation: ideas for experiments related to nutrition were put forward; the first experiments with 'new' crops/techniques were initiated

Session 5. Illness & care
- Illness and care: a social worker from the local 'drop-in centre' spoke about the relation between health and agriculture and specifically about the stigmatisation and exclusion of people living with HIV/AIDS and care for ill people; questions concerning HIV/AIDS and social grants were also answered
- Experimentation: last experiments were set up

Session 6. Experimentation
- Experimentation: progress of experiments was discussed with one of the community facilitators; together with the garden members the seed beds were prepared for the experimental crops
- Concluding: the session ended with a Christmas lunch with the whole group

Implementation

From October to December 2004, a 6-week trial was conducted with each group. A typical session comprised three key-elements: the garden, group dynamics, and a specific topic. A garden walk was organised according to the FFS/FLS way of working: members would go to the garden, collect samples of what they observed, and later discuss these observations with the whole group. Time was allocated to talk about the wellbeing of the group, attendance at meetings, work that had been done, and performance of the committee, while dynamic exercises were included to stimulate social interaction. Specific topics were presented and discussed by (local) professionals. Each session ended with a short evaluation. The FLS, including sessions and follow-up visits, was organised for one growing season.

Research methods and tools

Review of FLS sessions and field data

Between October and December 2004, extensive reports were drawn up of the FLS sessions for *post-hoc* analysis. These contained detailed descriptions of the methodology, setting, conditions, attendance, presentations, discussions, group dynamics, experiments, and progress. In addition, field reports were maintained for the remainder of the season.

Follow-up interviews

In January 2005, experiences from participants were captured by semi-structured interviews, to obtain more insight into the influence of HIV/AIDS on participants and the garden groups. Interviews were restricted to group A, an average performing group that was expected to provide insights into both aspects that went well and aspects that did not go well. In total, 14 people (13 women and 1 man, between 26 and 67 years of age) were selected, who varied in their degree of participation during the FLS sessions, personal situation and HIV/AIDS impact (see Table 3). Questions were related to the effectiveness of the FLS sessions and influencing factors.

Reflection with garden groups

In May 2005 the overall design, content, expectations, and outcomes of the project in general, and the FLS sessions in particular, were evaluated. Discussions were held with each group and interviews were conducted with key persons. In

Table 3. Characteristics of participants in follow-up interviews regarding age, gender, FLS sessions attended, and personal situation

	Age	Sex	No. of sessions visited	Personal situation*
1	34	F	0	Takes care of sister in law (HIV-positive) and her children; income R400-500 pm
2	48/49	F	0	HIV+ (very ill); husband died; income R500-600 pm
3	42	F	1	HIV+ (very ill); polygamy ; income R500 pm
4	50	F	1	Cares for sister's child; polygamy; husband died (tribal war); income R300-400 pm
5	40-45	F	1	HIV+ (very ill); polygamy; husband died (tribal war); income R150 pm
6	33	F	2	HIV+; first husband died after long illness; income R1900 pm
7	39	F	2	HIV+; sisters and cousin died of AIDS; cares for orphans; income R750-850 pm
8	42	F	2	HIV+; husband died after illness; income R200 pm
9	67	F	2	One son sick, daughter-in-law died; takes care of two orphans; income R800 pm
10	47	F	3	Sister-in-law and husband died; takes care of four orphans; income R740pm
11	49	F	4	Husband died; income R60 pm
12	26	M	5	Parents died (due to AIDS); looks after brothers and sisters; income R1000 pm
13	47	F	5	Brother died (stroke); left with four orphans; income R1200 pm
14	66	F	5	One daughter died; takes care of two orphans; income R900-1000 pm

* Data based on questionnaire completed by garden group members in May 2004.

group A, 9 people joined the group discussion, including the chairperson. In group B, 12 members joined the discussion, and an interview was held with the HBC worker. In group C, 23 members participated in the group discussion, while the secretary was interviewed. In addition, a discussion was held with the facilitation team and the overall coordinator of the project.

Data process and analysis

The researchers of the facilitation team produced detailed reports of each FLS session, which were validated by the other team members. Field reports were maintained by the community facilitators and discussed with the overall coordinator. Follow-up interviews were conducted by one of the researchers with the help of a translator. Interviews were recorded and subsequently transcribed into English. A freelance researcher conducted the reflection process; findings were presented in an internal report. Information obtained was codified so that confidentiality was maintained.

A basic analytical framework was used, drawing on the key elements of the FFS/FLS approach: participation, learning, and empowerment (Braun *et al.*, 2006; du Guerny *et al.*, 2002; Pontius, Dilts & Bartlett, 2000). Generally speaking, participation means 'taking part' and 'getting involved' (Pretty, 1994). However, in the case of poverty and HIV/AIDS this may be problematic. HIV/AIDS impoverishes and demoralises people (Swaans *et al.*, 2005). For this reason, the study focussed mainly on participants' attendance (i.e. attendance per session, sessions attended per participant) and engagement (i.e. involvement, enthusiasm, motivation).

Learning is a 'broad' concept. FFS/FLS approaches differentiate between technical, practical, and emancipatory learning (Pontius *et al.*, 2000). The technical domain relates to knowledge and skills to control the physical and social environment (i.e. concerning gardening, nutrition, health and HIV/AIDS). In the practical domain the concern is with understanding and meaning. It refers to knowledge and skills needed to communicate and act effectively in interaction with others. The emancipatory domain is concerned with self-reflection and critical thinking about internal and external factors that constrain people's lives.

Finally, empowerment refers to increased control over inhibiting factors (Carney, Drinkwater, Rusinow *et al.*, 1999; Pontius *et al.*, 2000). In this case, we are talking about the empowerment of a group of women who agreed on a common goal and undertook action to reach that goal. However, it would not be easy to mobilise them as long as they continued to perceive themselves as powerless and played the subordinate role that was 'culturally' expected of them (Crawley, 1998; Mayoux, 1995). Therefore empowerment is evaluated and discussed in relation to its psychosocial, socio-economic, and political dimensions (Page & Czuba, 1999). The psychosocial dimension deals with aspects such as 'freedom to speak out', '(access to) knowledge and skills', 'self-esteem and confidence', and 'a positive outlook' (Van Woudenberg, 1998). Socio-economic aspects of empowerment refer to access and control over food, finances, education, health, safety, and shelter (Carney *et al.*, 1999). The emphasis in this study was on food security as it featured as one of the main problems in a former study (Swaans *et al.*, 2005). Within the political dimension the main focus is on the influence on (institutional) structures and processes (Carney *et al.*, 1999; Pijnenburg, 2004).

Table 4. Key elements, domains/dimensions, and indicators of the analytical framework

Elements	Domains/dimensions	Indicators
Participation	Attendance	Attendance per session and number of sessions attended by each participant
	Engagement	Involvement, enthusiasm, motivation
Learning	Technical	Knowledge and skills related to gardening, nutrition, health and HIV/AIDS
	Practical	Knowledge and skills needed to communicate and act effectively in interaction with other
	Emancipatory	Critical thinking on internal and external factors that constrain people's lives
Empowerment	Psychosocial	Freedom to speak out, (access) to knowledge/skills, self-esteem/confidence, positive outlook
	Socio-economic	Access and control over food, finances, education, health, safety, shelter
	Political	Influence on (institutional) structures and processes

Qualitative data were subjected to thematic content analysis (Flick, 1992), using the three key elements of the analytical framework and respective subdivisions as the core categories of our coding frame (see Table 4).

Participant observation, informal talks and meetings were used to verify findings. To enhance validity, triangulation of the various sources and methods was used. Preliminary results were presented to representatives of garden groups and partner organisations, and peers were asked to react to emerging findings. In all data collection methods, researchers were involved who were independent from the overall action-research project. They stayed in the research area during the study, so that what took place was encountered first hand and was well understood in relation to the context.

Results

Taking the analytical framework as a starting point, the study examined the impact of the FLS approach on participation, learning and empowerment, and the influence of HIV/AIDS on each of these elements. These constitute the section headings under which our findings are presented below.

Participation

Attendance

In the reflection exercises, participants were positive about the sessions and appreciated their regularity. According to them this established consistency and encouraged participation. However, when we look at attendance throughout the programme, as indicated in Table 5, the number of participants fluctuated greatly. Moreover, only half of the participants (59 out of 115) attended 3 or more sessions. Attendance in the already existing group (C) was more frequent than in the newly formed ones (A and B).

From the interviews and group discussions, it became clear that in each group there was a core group of 'committed' members who were consistently present. However, there were also many members who did not come often. The 'committed' members suggested that this was due to institutional problems, such as the delay in ploughing and lack of access to water. However, it may also be linked to specific needs. Initial expectations, especially among newly formed groups (A and B), were higher than could be achieved through the pilot with the FLS. Some expected that orphans would be provided with food, clothes, social grants, and/or access to education, while the FLS is mainly aimed at capacity building.

However, there were also other factors that made participation, even among 'committed members, difficult. In general, participants were struggling to come to sessions or the garden due to domestic activities, such as taking care of children and sourcing and preparing food. Although gardening seems to be a straightforward way of improving food security, many people chose to become or remain engaged in other jobs or part-time construction work on local roads, where they received regular wages.

Table 5. Number of participants per FLS session and frequency of participation

Group	Members	Participants per session						Frequency of participation					
		1	2	3	4	5	6	#1	#2	#3	#4	#5	#6
A‡	64	15	18	23	9	15	26	16	16	5	4	4	0
B	35	18	13*	13*	13	15†	17	3	2	9	3	6	-
C‡	47	21	29	27	25	26†	18	11	8	11	6	10	1
Total	146	54	60	63	46	56	61	30	26	25	13	20	1

*Session 2 and 3, on 'vision & organisation' and 'sustainable agriculture' merged for practical reasons

†Session 5 on 'illness & care' actually took place after session 6 on 'experimentation'

‡Groups were sometimes split into morning and afternoon groups (numbers refer to total participants)

Some were not able to attend due to poor health. One of the HIV-infected members said: *'I have never been in the garden since it has been planted. Sometimes I do not hear that we have to be there. Sometimes I do, but I am sick and not able to go. I usually suffer from diarrhoea and right now I do not know how big the maize is. I told myself that since I am not able to work in the garden I was going to withdraw.'*

Others had to take care of ill people in their household. It is usually women who face the extra burden of care. A few members passed away due to AIDS just before or during the course of the pilot.

Local traditions related to death also affected participation. When someone in the community dies, relatives and neighbours are expected to comfort the family of the diseased. On the day of the funeral no one in that area is allowed to work in the field, while family members are not allowed to work for a week. Widows are particularly affected as they cannot work or be in the garden for as long as they mourn – this period varies from 3 to 6 months (Swaans *et al.*, 2005). Some sessions had to be postponed, as people died almost every week.

Some members left the groups due to stigma. In the communities of the newly formed groups (A and B), the gardens were referred to as 'AIDS gardens'. One woman said: *'When this garden was initiated, people refused to join. Others withdrew, because it was said to be for HIV-infected people. We stayed on, because we wanted help. Men walked out of the meeting. They said that those who stayed are HIV positive.'*

However, resilience to stigma varied across groups. One group (A) was more resolute to continue and seemed less concerned about the gossip. Some members who left the group returned when the garden was doing well. In the other group (B), however, some became too scared to come to the garden, after rumours became hostile and community members tried to damage the crops.

Violence was another common fear and concern. Many interviewed women felt unsafe on their way to and from the sessions; robbery and assaults were feared around and after sunset. This meant that sessions had to start and end on time, especially considering the fact that some members had to walk for up to 3 hours to get back home. Although some women wanted to leave their area for reasons of safety, they often lacked the means or possibilities to do so.

Finally, members were not always well informed about the sessions and garden activities. Lack of electricity, absence of cell-phones, or unreliable networks, made communication over long distances complicated. This was especially a problem for the newly formed groups (A and B). Their members were selected from a relatively large area and they did not know each other well.

Engagement

Those who did attend sessions were in general very motivated and involved. After a few sessions, most of them actively participated. In the evaluation after each session, the participants were enthusiastic about the topics and the methods. In relation to the introduction game, one of them recalled: '*… the game was very much fun. If it was not fun you would never have seen me again.*'

Especially methods using song, dance, visualisation and imagination played a crucial role for moral support and encouraged participants to speak out. Also the personal attention and support by the facilitation team was highly appreciated. Some later regretted that they missed some of the sessions. Despite their often difficult personal situations, most members remained active in the garden for the whole season.

Nevertheless, the emotional impact of illness, death and violence cannot be underestimated. It sometimes directly affected the group dynamics. The chairperson in one of the groups (B) stated that with the loss of members, their determination to participate also dwindled. In one of the other communities (A) a few people were murdered during the time of implementation. One of the members said: *'This is not a safe place to be in. We close our doors in the afternoon because we are scared. A woman was staying there* (pointing at the household opposite her). *They killed her in the early evening when she was cooking. … She was found decayed. A lot of things are happening here* (sighing heavily) *…. It is new, it never happened before and it continues. … You do not even know if it is coming to you.'*

At the time of the study, one of the group members was killed. This did not only have an emotional impact, but the brutality also created dismay, unrest and fear among members of the group.

Learning

Technical domain

As expected from adult learning principles, participants tended to remember specific knowledge better when they already used it in practice (Pontius *et al.*, 2000). In the reflection exercises, organised 4 months after the last session, most members still remembered methods of dealing with pest infestations, information on nutrition, compost making, and other farming techniques. Especially experimenting gave them the opportunity to try out new techniques or different crops, and

to sustain newly acquired skills, as some typical reactions show: *'Manure and compost are better in the garden. We saw that in the experiments we did with spinach, pumpkin and tomatoes.'* and *'I did not believe it when you were saying that the spinach could be planted in summer. That is why I wanted to try it. And it has proven you right.'*

However, observational and discovery-based learning became more complex when the impact was not immediately visible, local traditions were challenged or when practices depended on others. For instance, it proved more difficult to change consumption patterns or cooking practices within households than to change agricultural practices in the garden. When one of the women reduced the cooking time of vegetables to preserve vitamins, her children complained that they did not like the food. Another woman, being aware that saturated fats may cause high blood pressure, still bought such foods, as she was not doing the cooking.

In the case of HIV/AIDS, this became even more problematic. People were eager for information, but not all of them wanted to talk about it in the group. As HIV/AIDS is related to sex and death, it is considered a taboo. While the social worker got many questions about social grants, more specific questions, e.g. on '*how you get it*', '*the cause of the disease*', '*about blood tests*', '*how to take care of another person*', '*treatment*', '*how to behave when infected*', were more easily expressed in individual interviews than in groups. When people did speak out in group sessions, it was not always appreciated by others: *'I was not comfortable at all, not at all. She should not have disclosed the cause of the death of her son.'*

Although HIV/AIDS remained a sensitive topic, the participants mentioned in the reflection exercises that the practical and informal nature of the sessions and its relation with nutrition and care helped them to start talking about the topic in general terms.

Practical domain

The FLS enhanced a range of skills that enabled participants to work together more effectively. For instance, many were initially shy to speak out, but soon they became more communicative. Referring to the first session, one of them said: *'After that session I was happy, because we did not know each other. But now I know the people …. We have something to talk about now when we meet.'*

The sessions did not only help members to get to know each other, but also created an atmosphere in which they could discuss and challenge each other's perspectives. Participants learned to come to an agreement on rules, organisation and vision. They especially appreciated sessions that included visualisation ('pictures'), games ('get to know each other'), song and dance ('vision'), observation (garden walks) and discovery-based learning ('experimenting'). These methods stimulated group work and creativity, and increased enthusiasm, unity and respect. Participants indicated that this helped them to drive the decision making process and the activities in the gardens.

Still, the variation in age made it difficult for some to take part in discussions. For example, very young women remained more silent than others, respecting traditional norms and values. Older women sometimes lost their concentration or did not always comprehend the topics that were discussed. However, the younger ones were appreciated for their ability to write and their good memory, while the older women were valued for their motivation and positive influence on relations. In addition, older women usually play a central role in families (Swaans *et al.*, 2005), which may be important for getting wider support within the community.

In one group (C), members initially relied on their leaders. Strong leadership in this group seemed to have a negative impact, but at the end it gave them a clear direction and unity. For example, participation was relatively good and problems were easily solved. Many members in this group were at first reluctant to talk about HIV/AIDS, but this changed during the course of the programme. It seems that the emphasis on farming and nutrition and good relations allowed them to discuss HIV/AIDS at their own pace.

In the two newly formed groups (A and B), relations and trust were undermined by irregular participation, as a typical reaction showed: *'Some have never been to the garden …. They don't know how the garden looks like, but sure they will be there when it is time to harvest.'*

HIV/AIDS may have put relations further under pressure. Although some infected members praised their group's tolerance when they were sick, some suspected them of being lazy. Others were afraid of being associated with HIV/AIDS, which may be another reason why relations were not always optimal.

Emancipatory domain

Critical reflection helped participants to identify various constraints, such as limited access to water, pest infestations, damage by goats, unhealthy diets, limited access to markets, lack of money, and problems with governance and participation. Structural solutions were proposed, such as techniques for soil and water conservation, compost making, and the cultivation of

vegetables. Other suggestions referred to social aspects, such as saving money as a group, monitoring systems for participation, distribution systems and ideas for marketing, as well as working in smaller groups. Although the analysis and suggested experiments remained rather superficial, it showed the potential synergy between farming, nutrition, and social aspects.

The reflection on HIV/AIDS remained restricted to practical issues, such as access to social grants or how to take care of people who are ill and infected. This is not surprising. As most participants did not know each other well, they were afraid of gossip and of being stigmatised. Moreover, perspectives on HIV/AIDS varied from biomedical explanations to witchcraft (Swaans *et al.*, 2005). This made it difficult to start a constructive discussion and to challenge values and relations.

Empowerment

Psychosocial dimension

The involvement of (local) professionals gave participants access to knowledge and skills on farming and nutrition and 'up-to-date' information on HIV/AIDS. Even though HIV/AIDS was hardly discussed in a personal way, participants opened up and raised questions about the prevention of HIV/AIDS and its consequences. Some who were infected or affected mentioned in interviews that they were happy they finally had someone to talk to. In general, the sessions enhanced confidence and raised consciousness, as shown by some of the statements made: *'A person should talk about this (HIV status), not to die because of stress of knowing you have the disease and not talking about it.'* And *'When we talk about it (HIV/AIDS) in the garden, there is no stigma. We even encourage each other to go and have a blood test so that we know where we stand.'*

Some indicated that they would like to challenge those who wanted to join the garden again by reminding them that it was the HIV/AIDS garden, showing signs of a careful 'discussion' of HIV/AIDS as a communal problem. Others said that the sessions provided them with a positive outlook towards the future.

However, not everyone felt free to speak out. Apart from the sensitivity of the topic, negative attitudes or remarks in the groups about those who were infected or affected made some reluctant to speak out. Moreover, even though the FLS provided a platform for women to discuss HIV/AIDS-related issues, many women felt powerless regarding prevention. It is men who make the sexual and contraceptive decisions in this cultural setting (Swaans *et al.*, 2005). In one of the interviews a woman said: *'Ah! I try to tell him that "because you like women, you should do like this and this", but he will say that I am jealous. But I took a good look at him now. He is not well at all and he had sores all over …. I was not comfortable to be with him. I know the after-effects of unsafe sex. That is why I went for blood test. They said that I should come back after three months. Haai! …. HIV/AIDS is a disease that is there. I cannot run away from it.'*

Women need not only to be free to express themselves, but also to be aware of the choices they have. Inspired by the sessions, some women asked the facilitators to come and talk on HIV/AIDS during the holidays when their husbands were around. This is a clear indication of becoming more assertive – implying in public that they wanted to change their situation, but recognising they could not without reaching out to their husbands.

Socio-economic dimension

In general, members and facilitators perceived the gardens as a success. All groups produced maize and beans as the main crops in the garden, while they experimented with other crops on small plots. It was also encouraging that groups developed their own distribution systems. When asked how they sold and shared the harvest, the chairperson in one group said: *'Together with the HBC workers, I monitor the sharing and selling. Those members who can walk to the pension pay-out are advised to come and buy the maize from the garden at lower cost and resell it for their profit. Members have a discount …. About the sharing, I was marking the book of those who came to work as they were planting till the weeding. I am marking the book again for those who have received their share.'*

They took into account that some members were not always physically able to participate: *'When people are sick it is understandable when they cannot come to garden …, when we harvest we will take some portion to them as a group.'*

Despite differences in production, all groups managed to produce food for home consumption and to sell some of it on local markets. One group (C) even succeeded in saving a substantial amount of money.

However, throughout the season, the groups also faced 'technical' problems, such as the lack of easy access to water, insect infestations, theft, and lack of equipment. Especially water access was a major problem, which demoralised participants. Most proposed solutions, such as irrigation systems, better conservation, security, and organic pesticides, required money or time to develop and apply effectively.

Working together enabled participants to share resources and get access to draft power, seeds, fertilisers, and perimeter fencing. However, it also put a bigger claim on social organisation and was a source of conflict. Especially in the newly formed groups

(A and B), there was confusion about decisions made. For many members it was not clear how much was kept for home consumption, how much was sold, or what happened with the money of sold surplus. This was partly related to problems with participation, but committees were not functioning well either.

Under circumstances of scarce resources and malfunctioning groups, external factors can easily destroy success and morale, as one of the facilitators remarked: *'The members of this group have not managed to grow the beautiful crops like the others. Looking at the beans and maize you can see that they weeded late, the maize looks yellowish and the beans are not in good condition. Maybe it is because of the hail. … The group is presently not well motivated. They were destructed by the gossip that the garden was for AIDS.'*

In this group (B), a combination of bad weather and destructive social processes seem to have undermined their initial success. Also in this group, the impact of AIDS was most apparent and sessions were cancelled or postponed because of funerals.

Due to the vulnerability of participating households, it is not surprising that they mainly focused on food production. Alternatives related to nutritional value, year-round production, other sources of income, and social organisation remained largely unexplored. Although these aspects were mentioned during the sessions, it takes time and focused experimentation to adapt a production system to such alternatives.

In addition to food production, some families with orphans were assisted to a point where they received a social grant or got access to education. However, the time frame was too short to address aspects of health, education, and/or social welfare in a structural way. Nonetheless, the discussions during the sessions and individual cases showed the scope for improvement, as bureaucratic rules and institutional formalities made it complicated to take full advantage of various services.

Political dimension

Power is characterised by domination, authority and influence, but it can be influenced through social solidarity, i.e. through collaboration, sharing and mutuality (Kreisberg, 1992). This was particularly relevant within the context of the FLS. People's motivation, confidence and self-esteem were positively correlated with the overall functioning of the group and the garden. All groups wanted to continue with the garden and the FLS sessions. Some individuals saw the pilot as a first step toward other activities, such as chicken farming and selling produce to supermarkets.

However, when it came to decision-making and action, the newly formed groups (A and B) still depended on the project partners. Material funding and former experiences with subsidised programmes may have contributed to this. It needs to be realised though, that most members did not know each other well, as they move in with their husbands' family when married (Swaans *et al.*, 2005). This makes it difficult to establish independence based on unity and respected leadership. That this is not impossible, however, was shown by the group of women that already existed before the project started (C). Good leadership and internal motivation enabled them to expand and improve social cohesion.

So far, however, the influence of participants on (institutional) structures and processes has been limited. Male-dominated structures, lack of access to information and money for transport, as well as the top-down operation of service providers, made it difficult for women to act upon their needs. Stigmatisation of the garden in two of the communities (A and B) made it even more complicated, although it is positive that people in one of the communities (A) wanted to join again.

The involvement of local professionals was a first step toward establishing contacts and relations between participants/groups and service providers. Networking by the community facilitators with a variety of organisations also enabled them to refer members and groups to others when necessary. Although members may have recognised the opportunities for better contacts with service providers, it is questionable whether they realised their potential and were willing to challenge established structures or existing (cultural) norms and values.

Discussion

The study revealed various strengths of the FLS approach regarding participation, learning and empowerment. Many people, who are usually not reached by service providers, were not only able to participate, but were also very engaged and committed. The practical and informal 'nature' of the sessions made it easier for them to contribute meaningfully. In addition, working together on agriculture and nutrition enabled them to get to know each other, and enabled them to explore and learn more about HIV/AIDS at their own pace. Especially group-based methods using song, dance, visualisation and imagination encouraged participants to open up and speak out among others, while experimentation boosted people's confidence and enthusiasm. The practice of conservation agriculture helped them to grow crops with limited means. The pilot with the FLS showed that a welfare-oriented project for

women, where they were involved in sharing agricultural and other activities, provided them with emotional support – being a first step towards empowerment, while they produced food and saved some money. The group that was formed beforehand became an example of group cohesion and visionary leadership that resulted in positive outcomes.

However, various weaknesses can also be identified. The group-based character and intensity of the programme made it difficult for some members to participate as a result of poverty and HIV/AIDS-related illness and death (see also Sokunthea, 2002); this was often further constrained by stigma, gender relations and violence. It is well known that individuals and households affected by HIV/AIDS often struggle to cope (Rugalema, 2000). Labour shortages, exacerbated by HIV/AIDS, combined with declining household incomes are compounding food and livelihood insecurity (Topouzis & du Guerny, 1999). Moreover, HIV/AIDS often leads to confusion, denial and depression, resulting in withdrawal from social activities (Swaans *et al.*, 2005; Van Woudenberg, 1998). The general set-up seems rather rigid and not flexible enough to deal with these circumstances.

Furthermore, the FLS relies very much on discovery-based learning. In the FLS manual, human ecosystem analysis is explained as a process whereby farmers research issues related to their daily lives (Chhaya et *al.*, 2004). They prioritise them, and select families for further investigation in smaller groups to achieve a holistic understanding of the way people live and the factors that contribute to or detract from a healthy life. However, in the case of HIV/AIDS this remains problematic. For example, it remained difficult for participants to reflect critically on HIV/AIDS, despite signs of more openness and willingness to share experiences. This was especially prevalent where groups were newly formed, and could not build on pre-existing relations between their members. In addition, in a social environment in which stigmatisation of HIV/AIDS and violence are common, moving beyond the FLS group may even put participants and their families at risk (Walker *et al.*, 2004). Although the results seem to confirm the general belief that FLSs can only be implemented successfully when participants are already familiar with agro-ecosystem analysis (Müller, 2005), in the context of HIV/AIDS, other concepts, such as common ground, trust, safety, confidentiality and respect, seem at least as important.

Moreover, while setting up an FLS, complex social dynamics come into play. Many HIV/AIDS-related problems, such as stigmatisation, social exclusion, and gender inequality, are 'expressed' through institutionalised rules and behaviour (Douglas, 2004). Douglas argues that the way people assess risks is rooted in notions of social organisation and solidarity, and that change is mediated only through shifts in or challenges to collective values. This would imply that the poor respond to danger not on a risk-by-risk basis, but through adapting group values and commitments. This may explain why efforts to tackle AIDS and related problems on an individual basis have so far been rather ineffective (Walker *et al.*, 2004). However, despite its group-based character, the main focus of the FLS is on individuals, and not on the underlying values and relations between them (du Guerny *et al.*, 2002). Especially in the context of HIV/AIDS this seems to be a missed opportunity.

And finally, structural changes to improve people's lives have been limited, although one has to realise that one FLS season is very short to have a profound impact on economic and institutional aspects of empowerment. It takes time to acquire agricultural knowledge and skills and to apply them successfully to reap the benefits. Some suggest that this may take three to five years (Barnett & Grellier, 2003; Bishop-Sambrook, Kienzle, Mariki *et al.*, 2004). Vulnerable households do not only lack the money and time to invest in this, but also lack access to necessary services. In a recent review of FFSs, Braun *et al.* (2006) emphasise that sustainable, local level, institutionalised gains, can be negated or diminished when surrounding conditions are unsupportive. It seems even more difficult to change practices in relation to HIV/AIDS. Root causes of HIV/AIDS are related to gender and social inequalities, which are deeply ingrained in social norms and values and embedded in institutions and policies (Parker & Aggleton, 2003).

Conclusion and implications

Several lessons can be drawn from this study. Firstly, HIV/AIDS-related illness and death, and factors that drive the epidemic and its impact, such as poverty, gender inequality, stigma and violence, also undermine people's participation in development processes. Rules and recruitment of participants may unintentionally lead to the exclusion of the poor and people infected or affected by HIV/AIDS. Although agricultural NGOs, development organisations and public services have increasingly integrated HIV/AIDS as an important component of their focus (Gillespie, 2006), it has hardly led to fundamental changes in the methodology to include, rather than exclude, people who need it most. It requires a flexible approach that is better adapted to people's personal situation.

Secondly, the study shows the importance of developing trust relations and social cohesion. It requires a 'safe' environment in which participants feel free to express themselves and support each other. A group-based approach can help participants to get to know each other, build trust and stimulate learning. It provides the opportunity to challenge underlying values and

relations between them (Welbourn, 1995). The issue of safety and confidentiality deserves specific attention. Talking about HIV/AIDS provokes strong emotional reactions, positive and negative. It requires sensitive methods and competent process facilitation.

Thirdly, the case study shows the importance of achieving successes that others are 'envious' of, such as a thriving garden. An intervention must bring some kind of 'reward' to the participants, which in turn makes them stronger, as it helps to create a positive self image, and a project image of which they want to be part. Conservation agriculture has the potential to contribute to food security and income (see also Bishop-Sambrook *et al*., 2004). However, innovations have to go beyond labour-saving technologies to be effective. At least as important are shared activities and a feeling of 'togetherness', to reverse the destructive impact of HIV/AIDS on institutions. A small successful group can pave the way for a larger initiative that can sway others to get involved.

Fourthly, to achieve impact and innovation over the longer term, changes are required in larger sets of relationships or institutional arrangements than can be established by the FLS alone. Interventions such as the FLS need to be integrated into an overall programme on HIV/AIDS and food security, taking into account the specific needs of individual households, while creating a supportive environment at community level.

Last, but not least, when life more than livelihood comes under threat, the effectiveness of the FLS approach becomes questionable. In that case more immediate support is needed. This requires a technical, social and medical response, whereby individuals can be referred to other service providers when necessary. However, it is difficult to think of any approach being effective in fighting the epidemic and its devastating impact if poverty, inequalities and injustices are not seriously challenged.

Overall, we can conclude that the FLS has great potential to improve food security, while providing safe spaces to address HIV/AIDS. However, interventions aiming to mitigate the impact of HIV/AIDS need thorough understanding and where possible adaptation to the (social) context, in order to facilitate processes that reverse, rather than reinforce, social inequalities, stigma and discrimination.

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